

# Northwest Fisheries Science Center YEAR IN REVIEW 2013



**93,000 views**  
of this killer whale photo.

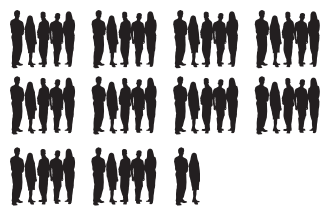
**by  
the  
numbers**



**134 scientific papers**  
and **2 books** published.

**48 popular articles**  
about our science.

**52 students**  
mentored by scientists.



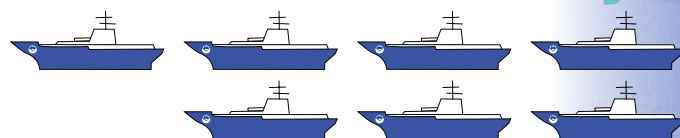
**1.1 acres transferred** to NOAA  
in Mukilteo after 40 years of research  
activities on the site.

**7 comprehensive benchmark**  
and **5 brand new** groundfish stock  
assessments completed.



**94 days tracking**  
a satellite-tagged Southern Resident  
killer whale to identify the winter hab-  
itat of this endangered species.

**295 days** at sea on  
**7 research surveys.**

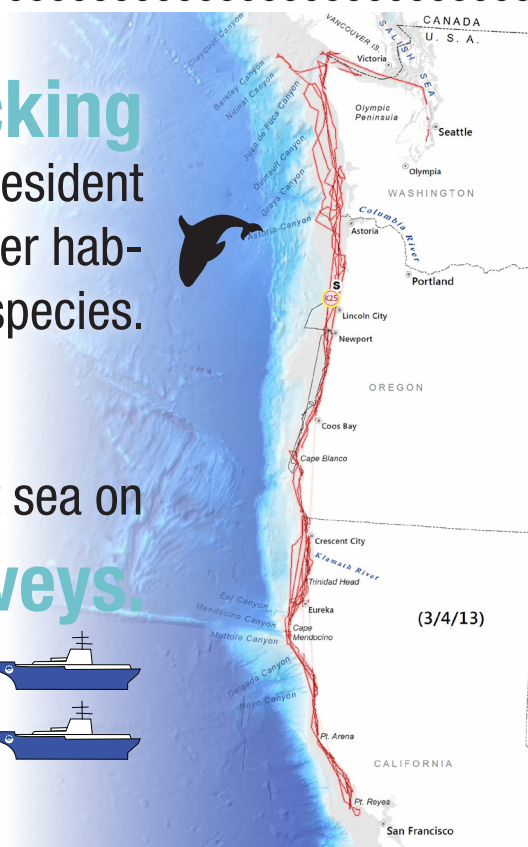


**109 trained observers**  
monitored the 2013 West Coast  
fisheries season.

**800 juvenile salmon** from  
Redfish Lake radiotagged  
to understand survival.



**1 TEDx talk**  
on ocean acidification.



# YEAR IN REVIEW 2013

## AWARDS

- 3 American Fisheries Society Awards, 1 Society of Conservation Biology Award, 1 Department of Commerce Gold Medal, 1 NOAA Silver Medal, 1 NOAA Administrator's Award, 2 NOAA Employee of the Month Awards, 1 NOAA Team Member of the Month, 4 NOAA Fisheries Northwest photo contest winners.

## ECOSYSTEMS

- Published a 900-page 2012 Integrated Ecosystem Assessment for the California Current in an interactive, web-based format.
- Proposed a framework to integrate cultural dimensions, such as our values, knowledge, and livelihoods, into the conservation of coastal environments.

## SALMON AND ANADROMOUS FISH

- Identified 32 demographically independent populations and 2 major population groups as part of the recovery effort for threatened Puget Sound steelhead.
- Began developing artificial propagation methods to proactively address recovery of Pacific lamprey.
- Tracked 31 indicators from the Pacific Ocean to predict adult salmon returns to the Columbia River.
- Discovered a "portfolio effect" in Snake River Chinook salmon - diversity in the first year can protect the population's response to large-scale changes from climate and hydroelectric dam operations.
- Developed molecular markers related to a young salmon's ability to imprint on the unique scent of its natal stream, which can help managers minimize straying of juvenile salmon that are barged through the federal Columbia River hydropower system.

## KILLER WHALES

- Completed a 10-day killer whale cruise that followed Southern Resident killer whales for 350 miles along the West Coast. Scientists collected 24 prey samples, 21 fecal samples, 9 biopsy samples, and 3 mucous samples from Southern Residents and offshore whales.
- Analyzed genetic data of 78 Southern Resident killer whales to better understand their family tree and identify samples to specific individuals.

## MARINE FISH

- Trained or briefed 89 catch share observers and 20 non-catch share observers, ensuring a fishing season for 2013.
- Observers took over 2,250 catch share trips and 737 non-catch share trips off the West Coast.

## HABITAT

- Published comprehensive guide that translates habitat science and best practices for stream and watershed restoration students and practitioners.
- Led publication of 2<sup>nd</sup> annual report of Puget Sound marine water conditions, providing indicators to measure progress on restoring the Sound.
- 11 NWFSC co-authors of a special section of Conservation Biology about incorporating considerations of a changing climate in endangered species recovery.

## SEAFOOD SAFETY

- Deployed water quality robot in Puget Sound to help provide an early warning of harmful algae and pathogens.

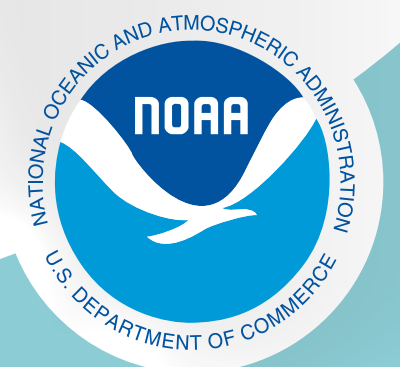
## SCIENCE SUPPORT

- 700 web pages reviewed and updated for our redesigned, mobile-friendly website.
- \$1.4M of facilities upgrades begun at our Montlake headquarters and research stations in Washington and Oregon.
- 800 native plants, shrubs, and trees planted at the Montlake Laboratory to restore adjacent Portage Bay shoreline.

**Northwest Fisheries Science Center**  
[www.nwfsc.noaa.gov](http://www.nwfsc.noaa.gov)

 NOAA Fisheries West Coast  
- Science & Management

 @NOAAFish\_NWFSC



**NOAA**  
**FISHERIES**